CLAIMS

1. An emulsified composition comprising a major amount of water in the range of about 99% to about 5% by weight of the emulsified composition, a minor amount of an oil in the range of about 1% to about 95% by weight of the emulsified composition and a minor but effective amount of at least one emulsifier to emulsify the aqueous and organic phase resulting in a water in oil emulsified composition wherein the emulsifier is selected from the group comprising:

(i) a oil soluble product made by reacting at least one hydrocarbyl-substituted carboxylic acid acylating agent with ammonia or an amine including but not limited to alkanol amine, hydroxy amine, and the like, the hydrocarbyl substituent of said acylating agent having about 50 to about 500 carbon atoms;

(ii) any other acylating agent having at least one hydrocarbyl substituents of up to about 40 carbon atoms, and reacting that said acylating agent with ammonia or an amine;

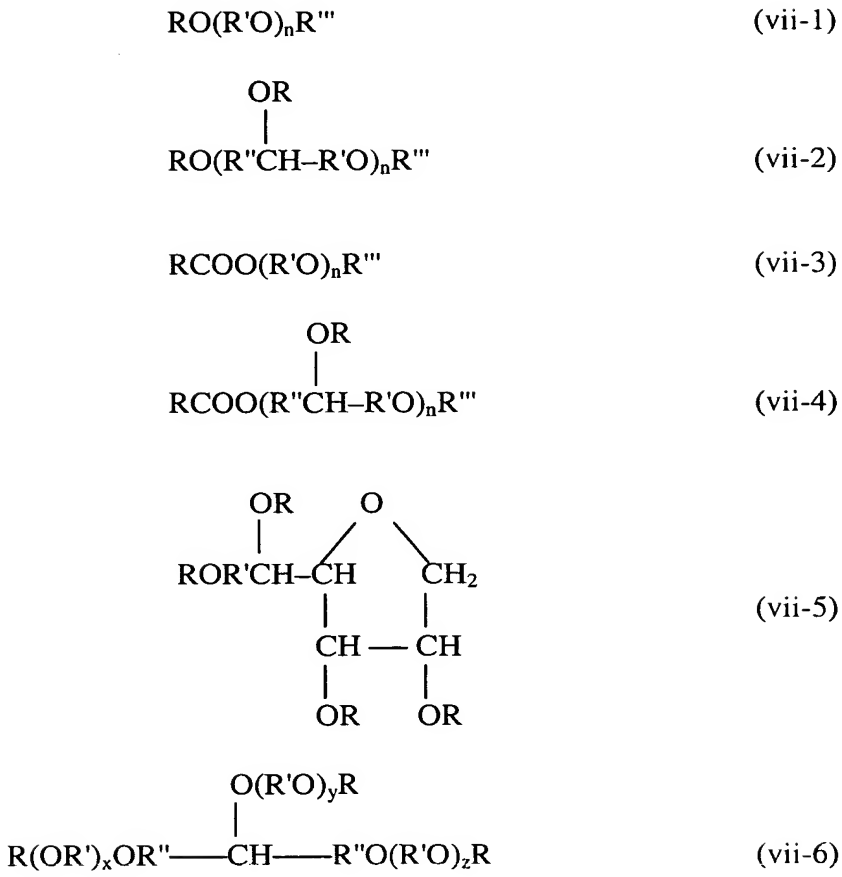
(iii) any other ionic or a nonionic compound having a hydrophilic-lipophilic balance (HLB) of about 1 to about 40;

(iv) the reaction product of polyacidic polymer with at least one oil soluble product made by reacting at least one hydrocarbyl-substituted carboxylic acid acylating agent with ammonia, an amine, a polyamine, an alkanol amine or hydroxy amines;

(v) an amino alkylphenol which is made by reacting an alkylphenol, an aldehyde and an amine resulting in an amino alkylphenol;

(vi) a hydrocarbyl substituted carboxylic acid, or a reaction product of the hydrocarbyl substituted carboxylic acid or a reactive equivalent of such acid with an alcohol, the hydrocarbyl substituent of the acid or reactive equivalent thereof containing at least about 30 carbon atoms;

(vii) at least one compound represented by one or more of the formulae:



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wherein each R is independently hydrogen or a hydrocarbyl group of up to about 60 carbon atoms; each R' and R" is independently an alkylene group of 1 to about 20 carbon atoms; each R"' is independently hydrogen, or an acyl or hydrocarbyl group of up to about 30 carbon atoms; n is a number in the range of zero to about 50; and x, y and z are independently numbers in the range of zero to about 50 with the total for x, y and z being at least 1;

(viii) an etheramine used to the make the composition of this invention can be represented by the formula

wherein each n is a number from 0 to 50; each R is selected from the group consisting of hydrogen, hydrocarbyl groups of 1 to 16 carbon atoms, and mixtures thereof; each R^1 is selected from the group consisting of a hydrocarbylene group containing 2 to 18 carbon atoms and a group represented by the formula

$$--R^6\ N_p\ --R^7 -$$

wherein both R^6 and R^7 are hydrocarbylene groups of 3 to 10 carbon atoms and p is a number from 1 to 4; and each R^2 is a hydrocarbyl group having a valence of y where y is a number from 1 to 3, and containing 1 to 50 carbon atoms when y is 1 and 1 to 18 carbon atoms when y is 2 or 3; provided that when n is zero, y is 1;

(ix) a phospholipid, any lipid containing a phosphoric acid, such as lecithin or cephalin;

(x) an amine represented by the formula:

R-NH2

where R = a poly(isobutenyl) group of molecular weight between 350 and 3000, or

(xi) the combination of any other above listed emulsifiers.

2. The composition of claim 1 further comprises at least one of water soluble additives, oil soluble additives, alcohols, thickeners, solid additives and combinations thereof.

3. The composition of claim 1 further comprising at least one thickener such as lithium 12-hydroxy stearate and wherein the emulsified composition has a viscosity in the range of about 200 to about greater than 2,000,000 cPs measured on a Brookfield Viscometer with a No. 7 spindle at 20 rpm at 25°C.

4. The composition of claim 1 wherein the oil comprises natural oils, synthetic oils, alkylene oxide polymers, esters of dicarboxylic acids, unrefined oils, refined oils, re-refined oils, waxes, oil of lubricating viscosity and combinations thereof.

5. The composition of claim 2 wherein the water soluble additives are selected from the group comprising at least one of alcohols; extreme pressure anti-wear additives; water soluble salts, selected from the group comprising dihydrogen butyl phosphate, water soluble dithiophosphate salts and combinations thereof; water soluble inorganic salts selected from the group comprising xanthates, dithiocarbonates, trithiocarbonates, sulfates, sulfites, sulfides and combinations

thereof; water soluble phosphate esters, phosphites, phosphonates, dithiophosphate esters; water soluble rust inhibitors selected from the group comprising morpholine and alkanolamines, phosphorous and phosphoric acid derivatives including mono and diesters and amine or metallic salts of phosphoric and phosphorous acid, thickeners and combinations thereof and wherein the water soluble additives are present in the range of about 0% to about 50% by weight of emulsified composition and the oil soluble additives are present in the range of about 0% to about 75% by weight of the emulsified composition.

6. The composition of claim 2 wherein the oil soluble additives are selected from the group consisting of extreme pressure anti-wear additives, metal deactivators, dispersants, antifoams, corrosion rust inhibitors, antioxidants, detergents, polymers, viscosity modifier, functionalized polymers and combinations thereof.

7. The composition of claim 6 wherein the antioxidants comprised of phenate sulfides, phosphosulfurized terpenes, sulfurized esters, aromatic amines, hindered phenols and combinations thereof and wherein the antioxidants are present in the range of about 0% to about 10% by weight of the emulsified composition.

8. The composition of claim 6 wherein the metal deactivators comprise benzotriazole, benzimidazole, 2-alkyldithiobenzimidazoles, 2-alkyldithiobenzothiazoles, 2-(N,N-dialkyldithiocarbamoyl)benzothiazoles, 2,5-bis(alkyldithio)-1,3,4-thiadiazoles, 2,5-bis(N,N-dialkyldithiocarbamoyl)-1,3,4-thiadiazoles and combinations thereof and wherein the metal deactivators are be present in the range of 0% to about 5% by weight of the emulsified composition.

9. The composition of claim 6 wherein the oil soluble detergents comprise overbased materials prepared by reacting an acidic material with a mixture comprising an acidic organic compound, a reaction medium comprising at least one inert, organic solvent for the acidic organic material, a stoichiometric excess of a

metal base, and a promoter and wherein the detergent is present in the range of about 0% to about 8% by weight of the emulsified composition.

10. The composition of claim 6 wherein the antifoams comprise organic silicones, dimethyl silicone and combinations thereof and where the antifoams are present in the range of about 0% to about 2% by weight of the emulsified composition.

11. The composition of claim 6 wherein the antirust compounds comprise alkyl substituted aliphatic dicarboylic acids, alkenyl acids, succinic acids, sulfonates relating to the metal detergent, sodium nitrite, calcium salts of oxidized paraffin wax, magnesium salts of oxidized paraffin wax, alkali metal salts, alkaline earth metal salts or amine salts of beef tallow fatty acids, alkenyl succinates or alkenyl succinic acid half esters, glycerol monoesters, nonylphenyl ethoxylate, lanolin fatty acid esters, calcium salts of lanolin fatty acids, and combinations thereof and wherein the antirust compound is present in the range of about 0% to about 10% by weight of the emulsified composition.

12. A composition of claim 6 wherein the viscosity modifier is selected from the group ofpolyacrylates; poly methacrylates; olefin co-polymers; functionalized olefin copolymers, such as reaction products with maleic anhydride; ethylene/ propylene/ diene terpolymers; functionalized ethylene/ propylene/ diene terpolymers, such as reaction products with maleic anhydride; the esterified reaction products of maleic anhydride/ styrene co-polymers; styrene-butadiene copolymers; clays, optionally hydrophobically modified.

13. The composition of claim 6 wherein the functionalized polymers comprised of maleic anhydride grafted olefin terpolyer of ethylene/propylene/ norbornadiene.

14. The composition of claim 1 wherein the emulsifier comprises a surfactant with a hydrophilic lipophilic balance less than or equal to HLB of 9.

15. The composition of claim 1 wherein the emulsifier comprises a mixture of the reaction product of a fatty acid with an alkanol amine; and the reaction product of a polyisobutene substituted succinic acid or anhydride with an alkanol amine or an alkylene polyamine, the polyisobutene substitutent having a number average molecular weight of about 300 to about 3000.

16. The composition of claim 1 wherein the emulsifier comprises a polyisobutene substituted succinic acid and wherein the oil comprises an oil of lubricating viscostiy.

17. The composition of claim 16 wherein the emulsifiers comprises a 2300 MW polyisobutene substituted succinic acid.

18. The composition of claim 1 wherein the emulsifier comprises an alkylaryl sulfonate, amine oxide, carboxylated alcohol ethoxylate, ethoxylated amine, ethoxylated amide, glycerol ester, glycol ester, imidazoline derivative, lecithin, lecithin derivative, lignin, lignin derivative, monoglyceride, monoglyceride derivative, lignin, lignin derivative, monoglyceride, monoglyceride derivative, olefin sulfonate, phosphate ester, phosphate ester derivative, propoxylated fatty acid, ethoxylated fatty acid, propoxylated alcohol or alkyl phenol, sucrose ester, sulfonate or dodecyl or tridecyl benzene, naphthalene sulfonate, petroleum sulfonate,tridecyl or dodecyl benzene sulfonic acid, sulfosuccinate, sulfosuccinate derivative, a 2300 molecular weight PIB succinic acid, an emulsifier represented by the structure $RO(C_4H_8O)_nCH_2CH_2CH_2NH_2$ wherein R = $C_{13}H_{27}$ and n = 20, or mixture of two or more thereof, each of these compounds having a hydrocarbon group of at least about 8 carbon atoms.

19. The composition of claim 1 wherein the emulsifier is present in the range of about 20% to about 0.25% by weight of the emulsified composition.

20. The composition of claim 2 wherein the alcohol comprises polyol, ethylene glycol, propylene glycol, methanol, ethanol, glycerols and combinations thereof and wherein the alcohol is present in the range of about 0% to about 30% by weight of the emulsified composition.

21. The composition of claim 1 wherein the emulsified composition is used for a selection from the group consisting of lubricants, greases, coatings, barriers, opaque coatings, translucent coatings, corrosion protective coatings, oxidation protection waxes, water protection coatings, environmental protection coatings, films, waxes and combinations thereof.

22. A process to produce an emulsified composition comprising

A. mixing the following components

(a) a major amount of water,

(b) a minor amount of an oil,

(c) at least one emulsifier,

(d) optionally, one or more water soluble additives,

(e) optionally, one or more oil soluble additives,

(f) optionally, one or more alcohols, and

(g) optionally, one or more thickeners, and

(h) combination thereof;

B. with sufficient shear to form a water in oil emulsified composition.

23. The process of claim 22 wherein the process is selected from the group comprising a batch, semi-batch, continuous or a combination thereof to produce an emulsified composition with a desired particle size and uniform dispersion of water in oil having a mean particle droplet size in the range of about 0.01 micron to about 20 microns.

24. The process of claim 22 wherein the temperature is in the range of ambient temperature to about 200°C, and the pressure is in the range of about atmosphere pressure to about 20,000/psi.